

Book Reviews

CRANIOFACIAL ANTHROPOMETRY: PRACTICAL MEASUREMENTS OF THE HEAD AND FACE FOR CLINICAL, SURGICAL AND RESEARCH USE. By J.C. Kolar and E.M. Salter. Springfield, IL: Charles C. Thomas. 1996. xxiii + 334 pp. ISBN 0-398-06616-7. \$69.95 (cloth).

Anthropometry has been central to quantification of body form since the mid-19th century. This book shows that in spite of many new techniques threatening to make it obsolete, anthropometry still has vital applications. The primary purpose of the book is to provide standardization of anthropometric techniques, mainly for clinical and surgical applications and research. Over 50% of its text pages are devoted to descriptions of instruments, landmarks, and measurement definitions. There are, in addition, brief chapters dealing with normal growth, clinical studies, and surgical planning. The Introduction covers some brief history, certain requirements such as the laboratory and equipment, education, and other details. The last chapter concerns computer imaging.

Each of the seven chapters devoted to measurement definitions is concerned with a specific craniofacial region: cranial, facial, orbital, nasal, orolabial, ear, and special circumstances and measurements. Measurement definitions are presented in a standard format; we are given the name of the measurement, any synonyms, including those in German and French, instrument required, method, and remarks. Synonyms are mostly from the comprehensive list of definitions presented in the various editions of *Martin's Lehrbuch*. The method descriptions provide guidance concerning positioning the subject and the instrument, and additional helpful hints are provided under Remarks. Accompanying each definition is a photograph illustrating the measurement. Over 80 measurements are defined in this manner. Many are nonstandard and require special measuring devices. The 20 different instruments are

depicted, and names and addresses of suppliers are provided.

Chapters not dealing with the techniques of measuring are designed to provide background on craniofacial growth, analysis, or application to surgical correction of craniofacial defects. There is a chapter on normal growth studies which is too short and superficial to be of much value. A chapter on clinical studies illustrates how various abnormal conditions depart quantitatively from normal. A chapter on surgical planning illustrates how anthropometric standards should be used to bring about a more normal appearance in patients suffering from these defects. A final chapter on computer imaging describes three-dimensional cephalometry, three-dimensional laser scanning, CT scans, and magnetic resonance imaging.

How useful is this book and what purpose does it serve? It is hard to imagine a more thorough treatment of the technical aspects of craniofacial measuring. For those whose work requires performing craniofacial anthropometry, or who teach some aspect of it, the book is an invaluable reference. It emphasizes the role that a trained anthropometrist should play in applying measurement data to clinical specialties. Hence it should also serve to make these specialties more aware of the contribution anthropometry can make and of the benefits of collaborative relationships.

This book is above all a measurement guide. Nevertheless, the authors missed an opportunity to stress what anthropologists have learned about metric variation. Obviously patients and controls should be ethnically matched and the authors do lament the lack of data on various ethnic groups in the US, pointing out that German anthropometric standards are not appropriate for North American children. Beyond that, might there not be regional or secular variation that should be accounted for? In the course of surgical planning, how closely matched to the patient's ethnic background, socioeconomic status, region of the country, or year of birth should the normative sample be?

The authors recommend expressing a patient's measurements as z-scores. The book would have been more useful if the composition of the sample providing the data for z-score computation had been specified and the means and standard deviations presented. These limitations do not detract

from the book's chief aim, but those seeking guidance on the role of variation in clinical application will have to look elsewhere.

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NEANDERTALS AND MODERN HUMANS IN WESTERN ASIA. Edited by Takeru Akazawa, Kenichi Aoki, and Ofer Bar-Yosef. 1998. New York: Plenum Press. 552 pp. ISBN 0-306-45924-8. \$79.50 (cloth).

"Not another one?" you ask. "Yes, another one," I reply. More focused in region and topic perhaps, and this is an important region and a reasonable topic, but indeed here is another volume on modern human origins, the same opera performed with the same parts being sung. The four sections of this volume, based on a November 1995 conference held at the University of Tokyo Museum, cover a broad range of related topics, including: 1) issues of evolution and chronology, 2) substantial writings on the archaeology of the region with cultural interpretations and subsistence strategies, and 3) views of cultural and human evolution from neighboring regions. The focus in this review will be on the issues of Levant paleoanthropology. Assuming familiarity with the conferences of the past decade, we might ask what progress there has been in understanding the paleoanthropological issues that this new compendium reflects. The answer is, not as much as hoped.

To cite one example, let us look at the question of when the Tabun woman died. Tabun is *the* key site for understanding Levant archaeology, as it continuously spans the entire archaeological sequence that is only represented piecemeal elsewhere in the region. The Tabun woman is one of the three fairly complete Levantine specimens identified as Neandertal, and not far from it was found Tabun 2, a mandible that some regard as an early "modern human." Thus the prove-

nience of the Tabun woman in the cave, and her age, address the problem implicit in the title of this volume. The relationship between Neandertals and moderns in the Levant, even if these labels are valid descriptions of the hominids found there (this is questioned by Arensburg and Belfer-Cohen's insightful paper, "*Sapiens and Neandertals*"), must fundamentally depend on their dating. So after more than a half century of dating and analysis, it is fair to ask how old the Tabun woman is. Prior to this conference two problems confused this. First, differing interpretations of Garrod's excavations placed the woman's skeleton alternatively in Tabun layers D, C, or B. As Stringer notes ("Chronological and Biogeographic Perspectives on Later Human Evolution"), this has not yet been clarified. Bar-Yosef ("The Chronology of the Middle Paleolithic of the Levant") believes she is a burial from layer B, although there is a widespread assumption that she was found in layer C (she is, after all, usually designated as the C1 hominid), and thereby penecontemporary with the Tabun 2 mandible. Second, the dating attempts based on different techniques were providing widely variable results. Just focusing on previously published layer C dates, the electron spin resonance (ESR) models gave 102 and 119 kyr, the uranium series gave 101.6 kyr, and the weighted thermoluminescence (TL) average was 110 kyr (the probable error ranges are purposefully left off these figures, which vary by much more than the error ranges encompass). Papers in this volume do not hint that there is yet a more confident answer, and estimates of the woman's age are more dispersed than ever. The paper by Valladas et